# Solid Head Mallet

A solid head mallet features a block head, a chiseled out hole in the center with a handle wedged in. This design is extremely strong and durable, and these maker-mallets are so useful, no matter whether you do fine woodworking, assembly work, jewelry work or other crafting.

I have made a lot of these mallets in different types of wood and in different sizes and today I want to go over how I make one of them, things I've learned and my general process.

## Step 1: Milling up the Wood

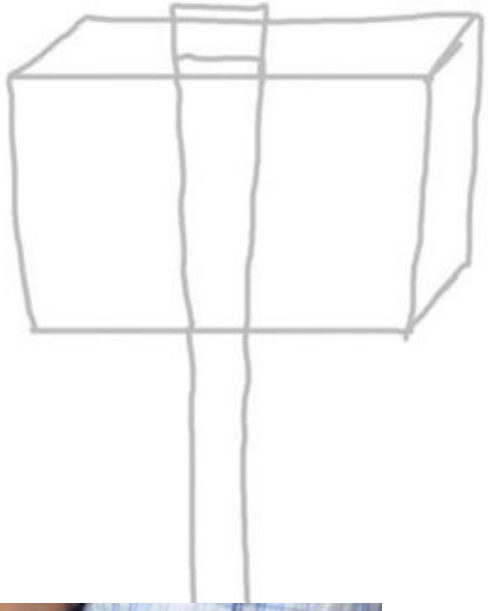
https://www.youtube.com/watch?v=jvzlrRqc7eg

Well, it all starts with the wood of course. This time I'm picking out a piece of maple from my stack, that I'm going to mill up on the band saw. I'm using my log milling jig here. It's quite the luxury having a thick piece of wood like this since it enables me to make a thick slab for the head. This time I'm aiming for about four inches thick, however this usually depends on what type of wood I have to work with. I like some mallets thinner at about two inches thick, however there is something special about the heftier design too.

Next, I'm taking the piece to the miter saw which I have set to 2 1/2 degrees, however you can set it to any degree you'd like and I'm cutting the sides to make a head.

Now it's time to plane the wood down on all sides to make sure I have a nice smooth block to work with, and I'm using a number 4 plane.

# Step 2: Marking out the Head



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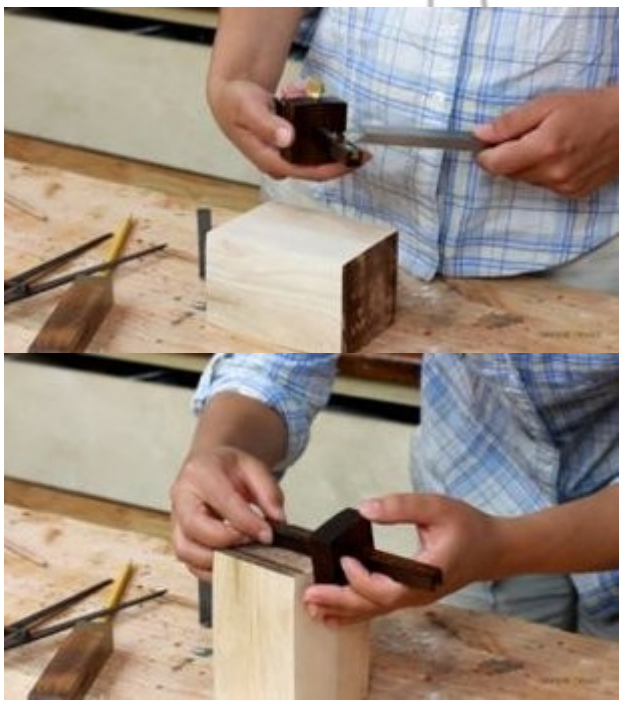
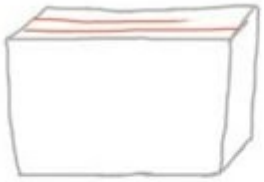




Time to bring out the tools to mark out the piece.

**I'm using:**

- a bevel
- a divider
- a pencil
- a small metal ruler
- mortising gauge
- an engineering square

A solid head mallet is constructed like this: I have a block with angled sides, I need a hole in the middle that carries that angle from top to bottom. So when the handle gets inserted it's wedged in which is why it stays and doesn't fly out.

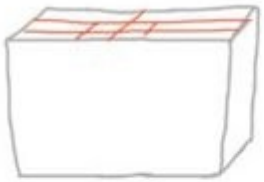
To accomplish this, laying out your marks right, is crucial, because everything will follow that.

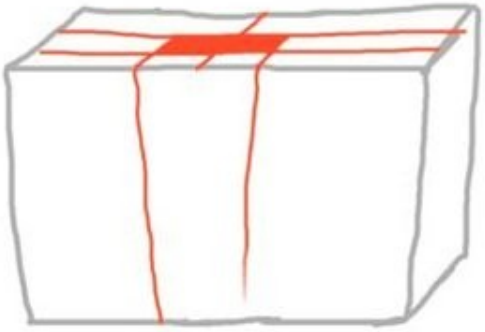
So first of all, I'm making sure the pins in my mortising gauge is set at the same distance as my chisel, which is 3/4 inch. Then I'm making sure the pins are located in the middle of my block, so I'm testing it out and adjusting.

What I need to do first is mark the top and the bottom with the mortising gauge to get these center lines which will also be the

thickness of my handle. So marking all across on the top, and in the center at the bottom.

## Step 3: Finish Marking





At this point I mark out the width of the handle from the center. My handle will be 1 1/2 inches, so I measure out 3/4 inch on each side and draw lines from the mortising mark to the edge.

Now I have the center marked out where the handle will fit, which needs to be carved out. Then I'm going to use the bevel, which is set at the same angle as the sides at 2 1/2 degrees, and I'm bringing the lines all the way down. This will be the angle of the sides of the handle as well, fitting inside the head.

Then I take the engineering square and bring the lines down straight to the side of the mortising mark. And I have the underside marked out as well. So here we have the piece marked out from the top to the sides to the bottom.

# Step 4: Drilling

Next, to remove material in the middle, I'm using a drill with a 5/8 inch spade bit. First I'm

finding the center in each section (there are two in the top and two in the bottom), and I'm drilling at a slight angle, trying to follow the angle of the sides, to about half way through. Then I'm turning the wood around and repeating on the other side.

# Step 5: Chiseling

And the chiseling begins. As in most woodworking, following the layout lines is very important. Initially, it's important to define your knife lines, you don't want to dig into the wood before you have established the boundaries of the chisel.

Once the lines are established I can start chiseling a little harder. And once the top is done reasonably well, I switch it over and do the other side, repeating the steps.

When I'm getting close, I like to take a small ruler and insert it, rocking it against the sides to see where my high spots are. And then going back and working on those.

## Step 6: Handle

I have a 1 1/2 inch by 3/4 inch piece of ipe here for the handle, and now I need to mark it out. So first laying the head on it and marking the top and the bottom.

Then I'm checking the width of the bottom hole with a compass, and marking that distance on the bottom mark on the handle. Then marking that distance to the top with a ruler.

And marking the width of the handle all the way down.

Then I'm using the bandsaw, following the lines to cut the handle to size.

## Step 7: Fitting

Next it's all about cleaning up the interior of the head, and I'm using a finer chisel now, in order to fit the handle. Then trying the handle in to see if it fits, doing a little more chiseling and so on.

When you get part of the handle in, if you're using a different colored wood, you can see the high marks on the inside where it's rubbing against and then you'll know you'll need to take that down a bit.

Now, I want a really tight fit, so it's important to not take off too much, yet at the same time you do need it to fit.

And then you can bang it in, see how much further you need to go. See the marks, and go back and chisel some more.

# Step 8: Bevel Sides

To remove the chance of the wood busting out at this point on the sides here, I like to bevel them slightly with a chisel, both on the top and the bottom. And cleaning the inside up a bit more, before testing again, and it looks good.

## Step 9: Shaping

Now time for shaping, I'm starting with the handle and using a spoke shave the round the corners. I really like using this tool.

Now when then handle is fitting in the head, I'm marking out where it needs to be cut on the top and the bottom. And shaping the top, add some beveled corners, smoothing out the bottom too.

Next shaping the head. And here you can really do whatever you want. For this mallet I wanted some shape, so I chiseled down the sides slightly. Then doing some planing, and finishing up with the spoke shave on all the sides.

## Step 10: Sanding and Finishing

Now finally, sanding. I like to start with 60 grit, and then move up quite high to like 320.

And only finishing left. I use my wax and oil polish on all my mallets which i really like because it protects and adds a very nice smooth feeling, without becoming too slippery. For example I wouldn't use shellac or polyurethane here, because I don't want the mallet to fly out my hand when using it, and this provides just the right finish.

# Step 11: Conclusion - Watch the Video

https://www.youtube.com/watch?v=jvzlrRqc7eg
In order to get a much better perspective on how to make this mallet, I recommend watching the how-to video that goes over this instructable in detail. These mallets are so much fun to make and a great project that you can complete reasonably fast. I also think solid head mallets is the perfect excuse to play with different types of woods because you get a great feel for the wood when making a mallet.